



Colorado
Environmental
Solutions

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LIMITED ASBESTOS BUILDING INSPECTION

Property Address:

2412 N Logan Ave
Colorado Springs, CO 80907

Prepared for:

City of Colorado Springs
702 E. Boulder St. Suite 202
Colorado Springs, CO 80903
719-385-6880

Inspected & Prepared By:

Matt Hothem
Building Inspector
Colorado Environmental Solutions
597 Chandelle Road
Castle Rock, CO 80104
(720) 282-5800

Asbestos Building Materials Inspection Date:

April 1, 2015

Report Date:

April 8, 2015

**ASBESTOS BUILDING MATERIAL INSPECTION
AS REQUIRED BY
THE ENVIRONMENTAL PROTECTION AGENCY
AND
THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND
ENVIRONMENT**

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SECTION I. INTRODUCTION

On April 1, 2015 Colorado Environmental Solutions (CES) initiated a limited asbestos building inspection of the single-family residence located at 2412 N Logan Ave, Colorado Springs, CO 80907. The purpose of the inspection was to test only the bathroom of the property that will be impacted during a planned renovation.

The on-site investigation for the inspection was conducted on April 1, 2015.

CES completed the following scope of work for conducting the inspection:

Complete a limited asbestos building inspection of the residential property located at 2412 N Logan Ave, Colorado Springs, CO 80907. The purpose of the inspection was to test for suspect asbestos containing materials (ACM) in the bathroom of the property that will be impacted during a planned renovation. CES developed a sampling scheme based on information provided by City of Colorado Springs that only the areas tested will be impacted during a planned renovation of the bathroom.

Matt Hothem of CES conducted the limited asbestos building inspection. Mr. Hothem is Accredited by the Environmental Protection Agency (EPA) and certified by the Colorado Department of Public Health and Environment (CDPHE) as an Asbestos Building Inspector. A copy of his accreditations and certifications can be found in (Attachment D.) of this report.

SECTION II. BUILDING INVENTORY

The residential property located at 2412 N Logan Ave, Colorado Springs, CO 80907 is brick and was built in 1951 and has approximately 1105 square feet. The building has forced air heat (HVAC) and the exterior of the property is in fair condition.

Refer to (Attachment A.) for a copy of the building floor plan. This floor plan was provided by CES and is only intended to provide approximate locations of wall lines, doors and windows.

SECTION III. INVENTORY OF HOMOGENEOUS AREAS

1. Locations of Bulk Samples

(Attachment B.) Contains the ACM bulk sample inventory, which provides the sample number, sample location and description for all bulk samples collected for this project. Attachment B. also contains a floor plan of the building identifying bulk sample locations. Bulk samples were given unique identification numbers consisting of four parts. The first letter "B" identifies the samples as bulk. The second set of numerals 2412 is the CES Project Number. The third set of numerals and letters represent the homogenous area

as determined by CES and the fourth set of numerals is sequential sample number acquired for this project.

2. Bulk Sample Collection

A total of 5 bulk asbestos samples were collected for this project. Matt Hothem collected samples B.2412.H1.001 through 002, B.2412.H2.001 through 003, B.2412.H3.001 through 002

All samples were collected on April 1, 2015

3. Homogeneous Areas Sampled

Only materials that will be disturbed during the planned renovation of the property were sampled. The sampled materials include but are not limited to, drywall/joint compound, ceiling and wall textures, acoustical overspray in ceiling fixtures, floor tile and floor tile adhesive, vinyl sheet flooring and vinyl sheet flooring adhesive, pipe insulation, HVAC sealant and caulking, and fireplace grout.

According to the EPA and CDHPE there are three categories of suspect materials, thermal system insulation (TSI), surfacing materials, and miscellaneous materials. TSI includes pipe and boiler insulation and related materials. Surfacing materials include; spray and trowel applied surfacing materials, such as sprayed on fireproofing and textured acoustical plaster. Miscellaneous materials include anything not mentioned in the two material types mentioned above, such as acoustical overspray, caulking, joint compound, and floor tiles.

Once the extent and type of material in a given homogeneous area is determined, the inspector can determine the number of samples to take in accordance with EPA and CDHPE. The definition for homogeneous area is "an area of surfacing material, thermal system insulation, or miscellaneous material that is Uniform in color and texture."

EPA and CDHPE allows the inspector to assume that any material does contain asbestos, and there are times when it is clearly evident that a material does contain asbestos from visual inspection. In those cases no sample needs to be collected, provided that the material is assumed to contain asbestos and treated as ACM. Where samples need to be collected to determine whether or not asbestos is present in a material that may or may not contain asbestos, it is necessary to follow the EPA and CDHPE rules governing the number of samples to collect. The number of samples acquired by EPA and CDHPE depends on the type and extent of material. For surfacing materials at least three samples of each homogeneous area must be collected in an area <1,000 square feet. Five samples in areas that are between 1,000 and 5,000 square feet. Seven samples in any area that is over 5,000 square feet. For TSI, a minimum of three samples per homogeneous material is required and/or one sample

per patch area (<3 sq. ft. or <3 l.f.). A minimum of one sample of each miscellaneous material must be collected, regardless of quantity, to show that material not to contain regulated levels of asbestos. Only if all samples from a homogeneous area contain less than or equal to one percent asbestos can the material be deemed to not be regulated as ACM. Averaging of results is not permitted under EPA and CDHPE and various state regulations.

The number of samples prescribed by EPA and CDHPE are minimums, and EPA and CDHPE further requires that the inspector take enough samples, as determined by professional judgment, to be satisfied that the material is homogenous. It is often difficult to determine from visual inspection whether a material is in fact homogeneous, so more often than a minimum number of samples are sometimes collected.

Occasionally, a material, which appears to be homogeneous by visual inspection, will yield conflicting lab results. Another site visit may be required to further investigate and sample where needed, in order to redefine the homogeneous areas. This is possible when further investigation can allow the inspector to be confident that there are two different materials and the one that contains asbestos can be adequately defined. If in an area given where conflicting results are first obtained cannot be sub-divided into two homogeneous areas, EPA and CDHPE requires that all of the material be presumed to contain asbestos.

CES collected bulk samples of suspect asbestos containing material (ACM) per Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) asbestos inspection regulations.

The following is an inventory of homogeneous materials identified at 2412 N Logan Ave, Colorado Springs, CO 80907.

Homogeneous Material Description	Homogeneous Area No.
---	-----------------------------

- | | |
|----|--|
| 1. | Joint compound and drywall in the bathroom of the property |
| 2. | Wall and ceiling texture in the bathroom of the property |
| 3. | Window glazing throughout the windows of the property |

SECTION IV. BULK SAMPLING PROCEDURES AND LOCATION SELECTION

1. Determination of sampling location

A. Surfacing Materials

All surfacing materials that were not assumed to contain asbestos were sampled in a statistically random manner. At least seven samples were collected from each

homogeneous surfacing material that was greater than 5,000 sq. ft. At least five samples were collected from each homogeneous surfacing material that was greater than 1,000 sq. ft. At least three samples were collected from each homogeneous surfacing material that was 1,000 sq. ft. or less.

B. Miscellaneous Material

For all miscellaneous materials that were not assumed to be asbestos containing, a sufficient number of samples were collected and analyzed to determine whether or not the material was asbestos containing (ACM).

C. Thermal System Insulation (TSI)

For all TSI materials that were not assumed to be asbestos containing, a minimum of three samples per homogeneous material were taken and/ or one sample per patch area (<3 sq. ft. or <3 l.f.)

D. Documentation of Bulk Sample Locations.

Bulk sample locations were noted on the drawings and on the bulk sample log. Refer to (Attachment B.) Bulk Sample Log/ Building floor plan with sampling locations. All samples are noted on the drawings and logged by sample ID number.

2. Bulk Sample Analysis

Reservoirs Environmental Services, Inc. (RESI) conducted bulk sample analysis, and using Polarized Light Microscopy (PLM) and or point count analysis. Results were reported in percent visual estimation by layer. RESI is accredited by the American Industrial Hygiene Association and is a successful participant in the National Voluntary Laboratory Accreditation Program (NVLAP) conducted by the National Institute for Standards and Testing (NIST). Participation in the NVLAP program is required by the EPA and CDHPE. The RESI reports are contained in (Attachment C.) of this report.

SECTION V. ASSESSMENTS OF ASBESTOS CONTAINING BUILDING MATERIALS

This Section contains the assessment, as required by the EPA and CDHPE, of the **asbestos containing materials** found in this inspection. The assessment provides a description of the condition upon inspection of the material and the potential for damage. Section V is broken down by areas of the building as determined by CES.

Please Note: CES recommends all renovation work impacting ACM in the building be completed by an EPA certified and Colorado State licensed General Abatement Contractor (GAC).

The “interior Area (Homogeneous Area #1) includes: Only the areas being disturbed during a planned renovation of the property

Joint compound in the bathroom of the property (Misc)

Bulk sampling conducted during this inspection identified that the joint compound in the bathroom of the property contains asbestos (3% Chrysotile).

Assessment: This inspection identified the material as undamaged and friable at the time of the inspection and had a hazard assessment of “Asbestos Containing Building Material (ACBM) with high potential for damage”. This assessment was assigned to the material because of the planned renovation taking place and the close proximity to workers and or occupants. There is an unknown amount of joint compound in the bathroom of the property. This material was composited and is below the EPA and State of Colorado regulated limit of 1%, however, OSHA guidelines and regulations still apply to this material.

Wall and ceiling texture in the bathroom of the property (Surf)

Bulk sampling conducted during this inspection identified that the wall and ceiling texture in the bathroom of the property contains asbestos (3-4% Chrysotile).

Assessment: This inspection identified the material as undamaged and friable at the time of the inspection and had a hazard assessment of “Asbestos Containing Building Material (ACBM) with high potential for damage”. This assessment was assigned to the material because of the planned renovation taking place and the close proximity to workers and or occupants. There is approximately 300 square feet of wall and ceiling texture in the bathroom of the property.

The “Exterior Area (Homogeneous Area #2) includes: The exterior of the property

Window glazing throughout the windows of the property (Misc)

Bulk sampling conducted during this inspection identified that the window glazing throughout the windows of the garage contains asbestos (.25% Chrysotile).

Assessment: This inspection identified the material as undamaged and non-friable at the time of the inspection and had a hazard assessment of “Asbestos Containing Building Material (ACBM) with low potential for damage”. This assessment was assigned to the material because of the planned demolition taking place and the close proximity to workers and or occupants. There is an unknown amount of window glazing throughout the windows of the garage. This material was below the EPA and State of Colorado regulated limit of 1%, however, OSHA guidelines and regulations still apply to this material. Being that this material is non-friable it can be left during renovation as

long as it is not rendered friable during the renovation process.

SECTION VI. MATERIALS CONFIRMED TO BE NON-ASBESTOS

This section identifies the suspect asbestos materials that were confirmed not to contain asbestos during this inspection.

***All Items tested were positive for asbestos**

The following materials were tested and found to have "Trace" amounts of ACM, which means the material was below the EPA and State of Colorado regulated limit of 1%. However, OSHA guidelines and regulations state the following materials must be point counted by a certified NVLAP laboratory and deemed not to contain asbestos before the material can be classified as non-asbestos and safe for workers. The following materials were point counted and the results were >0.25% asbestos so they cannot be considered negative for asbestos.

***Window glazing throughout the windows of the property**

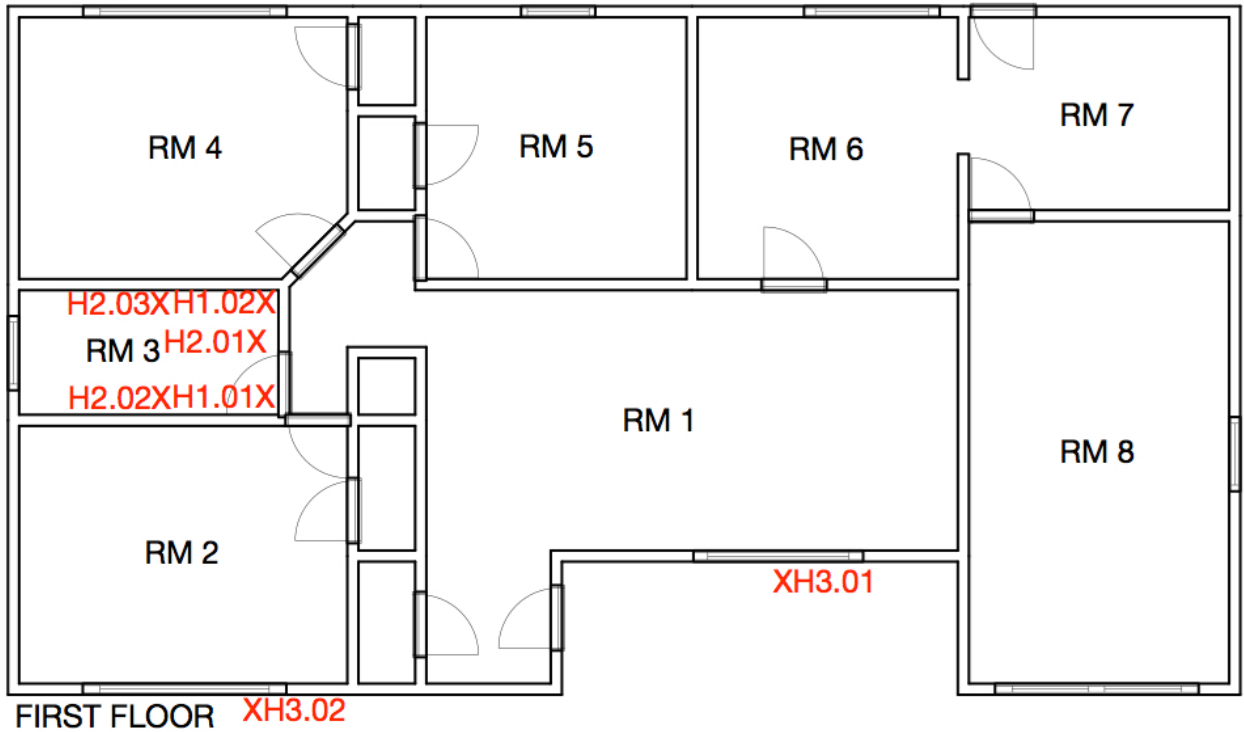
ATTACHMENT A
Building Floor Plan with ACM locations

2412 N LOGAN AVE
COLORADO SPRINGS, CO 80907

ABID DRAWING

NOT TO SCALE

X=ACM



PROPERTY ADDRESS: 2412 N LOCAL AVE
CA 91040-5815 CD 80907

INSPECTOR MHT PGCKM DATE/TIME 3/31/15

[illegible]

ATTACHMENT C

Reservoir Environmental Services, Ins. Laboratory Report and COC

Reservoirs Environmental, Inc.
Reservoirs Environmental QA Manual

Effective January 1, 2015
T:\QAQC\Lab\Reservoirs Environmental QA Manual.doc



April 9, 2015

Subcontract Number: NA
Laboratory Report: RES 316336-2
Project # / P.O. # 2412
Project Description: 2412 N. Logan Ave., Colorado Springs CO 80907

Matt Hothem
Colorado Environmental Solutions (Castle Rock)
597 Chandelle Rd.
Castle Rock CO 80104

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 316336-2 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0


TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 316336-2**
Client: **Colorado Environmental Solutions (Castle Rock)**
Client Project Number / P.O.: **2412**
Client Project Description: **2412 N. Logan Ave., Colorado Springs CO 80907**
Date Samples Received: **April 01, 2015**
Method: **EPA 600/R-93/116 - Point Count, Bulk**
Turnaround: **3-5 Day**
Date Samples Analyzed: **April 09, 2015**

ND=None Detected
TR=Trace, <1% Visual Estimate
Trem-Act=Tremolite-Actinolite

Client Sample Number	Lab ID Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
					Mineral	Visual Estimate (%)		
B.2412.H1.01	EM 1377847	A	Tan joint compound	3	Chrysotile	3	1	96
		B	Tan compound	5	Chrysotile	3	1	96
		C	White tape	10		ND	99	1
		D	Yellow/multi-colored paint	12		ND	0	100
		E	White/brown drywall	70		ND	50	50
B.2412.H1.02	EM 1377848				Composite	0.24		
		A	Tan compound	10	Chrysotile	3	TR	97
		B	Yellow/multi-colored paint	15		ND	0	100
B.2412.H2.01	EM 1377849	C	White/brown drywall	75		ND	30	70
					Composite	0.30		
		A	Tan compound	5	Chrysotile	4	1	95
		B	Yellow/multi-colored paint	95		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.


Brett S. Colbert
Analyst / Data QA

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0


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Trem-Act=Tremolite-Actinolite

Client Sample Number	Lab ID Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
					Mineral	Visual Estimate (%)		
B.2412.H2.02	EM 1377850	A	Tan compound	20	Chrysotile	3	1	96
		B	Yellow/multi-colored paint	80		ND	0	100
B.2412.H2.03	EM 1377851	A	Tan compound	20	Chrysotile	3	1	96
		B	Yellow/multi-colored paint	80		ND	0	100
B.2412.H3.01	EM 1377852	A	Gray glazing w/ cream paint	45	Chrysotile	TR	TR	100
		B	White glazing w/ white paint	55	Point Count	0.25	0	100
B.2412.H3.02	EM 1377853	A	Gray glazing w/ cream paint	30	Chrysotile	TR	TR	100
		B	White glazing w/ white paint	70	Point Count	<0.25	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.


Brett S. Colbert
Analyst / Data QA

Due Date: 4-6-48
Due Time: 4pm



Reservoirs Environmental, Inc.

5901 Logan St. Denver, CO 80216 • Ph: 303-964-1686 • Fax: 303-477-4075 • Toll Free: 888-RESE-ENV

RES 316336

After Hours Cell Phone: 720-338-9228

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: Colorado Environmental Solutions	Contact: Matt Hothorn
Address: 597 Chadwell Road	Phone: 720-273-2794
Castile Rock, CO 80104	Fax:
	Cell-phone: 720-273-2794
Project Number: 2412	Field Data Deliverable Email Address: matt@ces-inspection.com
Project Description: 2412 N LOGAN AVE, COLORADO SPRINGS, CO 80907	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm		VALID MATRIX CODES:		LAB NOTES:	
PLM / PCM / TEM	RUSH (Same Day) PRIORITY (Next Day) STANDARD	Air = A	Bulk = B		
	(Rush PCM = 2hr, TEM = 8hr)	Dust = D	Paint = P		
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 6pm		Soil = S	Wipe = W		
Metal(s) / Dust	RUSH 24 hr 3-5 Day	Swab = SW	F = Food		
RCRA 8 / Metals & Welding Fume	RUSH 5 day 10 day	Drinking Water = DW	Waste Water = WW		
Scan / TCLP	24 hr 3 day 5 Day	Q = Other			
Organics		**ASTM E1702 approved wipe media only**			
MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm					
E.coli O157:H7, Coliforms, S.aureus	24 hr 2 Day 3-5 Day				
Salmonella, Listeria, E.coli, APC, Y & M	48 Hr 3-5 Day				
Mold	RUSH 24 Hr 48 Hr 3 Day 5 Day				
Special Instructions:					
(Samples IDs must be unique)					
Client sample ID number		Matrix Code	Date Collected	Time Collected	EM Number (Laboratory Use Only)
1 B.2412.H1.01			3/3/15	8	1377847
2 " " .02				9	
3 B.2412.H3.01				50	
4 " " .02				1	
5 " " .03				2	
6 B.2412.H3.01				3	
7 " " .02					
8					
9					
10					

Number of samples received: 7 (Additional samples shall be listed on attached log form.)
NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing this agreement, you agree that submission of the following samples for requested analyses as indicated in this Check of Custody and Control is an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 15% monthly interest charge.


Relinquished By: MATT HOTHORN	Date/Time: 4/1/15 4:00 PM	Sample Condition: Temp (F) 4pm	On Ice: Yes / No	Sealed: Yes / No	Trace: Yes / No
Laboratory Use Only: Victoria Huthorn	Carrier: 4115				
Results:	Contact: Phone Email Fax	Date: Time	Date: Time	Date: Time	Date: Time
Contact:	Contact: Phone Email Fax	Date: Time	Date: Time	Date: Time	Date: Time

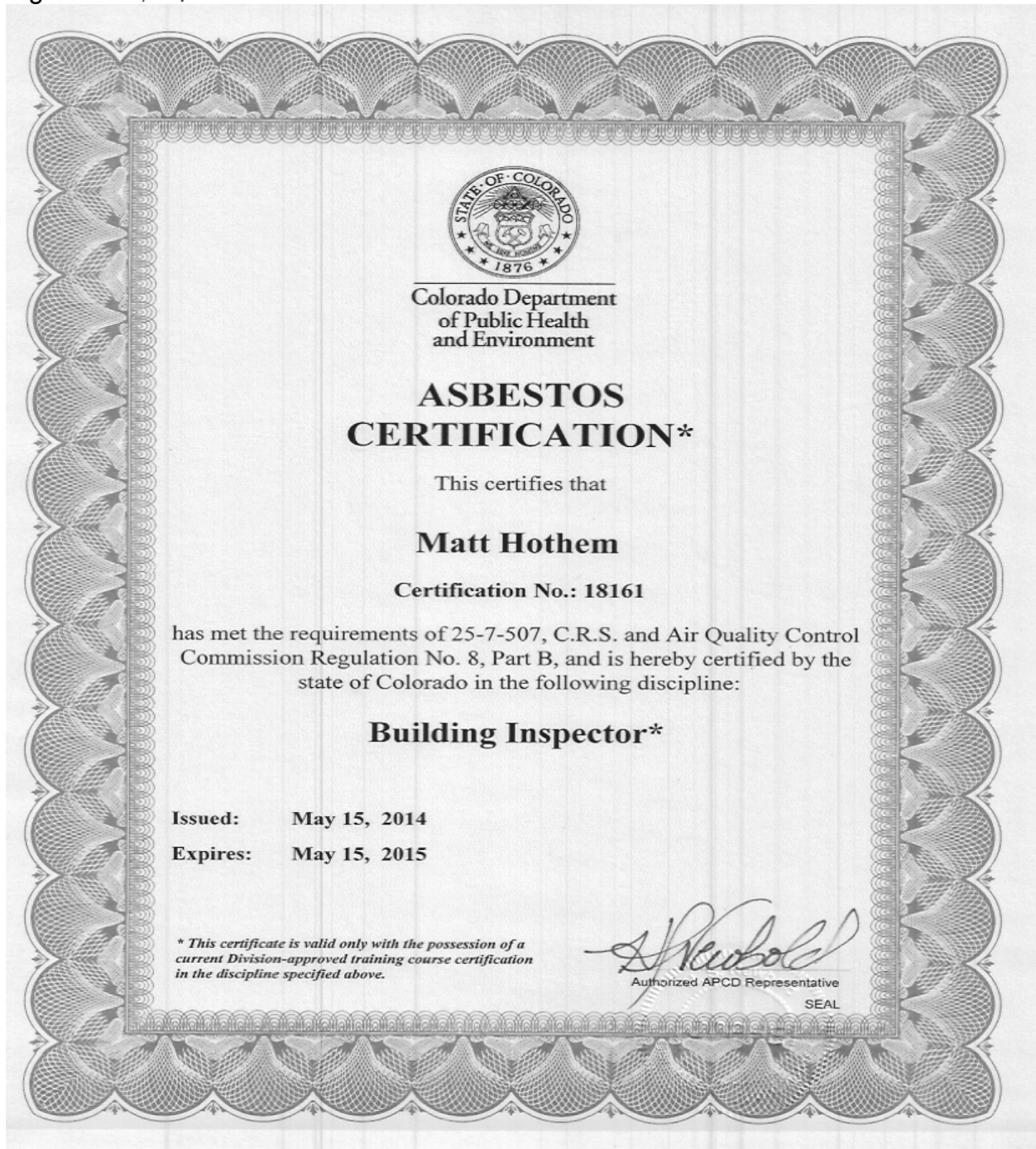
ATTACHMENT D

Certifications

The following representative of Colorado Environmental Solutions performed the EPA AHERA asbestos inspection:

Name of Asbestos Building Inspector: Matt Hothem

Signature: 





Colorado Department
of Public Health
and Environment

ASBESTOS CONSULTING FIRM

This certifies that

Colorado Environmental Solutions

Registration No.: ACF - 18317

has met the registration requirements of 25-7-507, C.R.S. and the Air Quality Control Commission Regulation No. 8, Part B, and is hereby authorized to perform asbestos consulting activities as required under Regulation No 8, Part B, in the state of Colorado.

Issued: June 13, 2014
Expires: May 31, 2015


Authorized APCD Representative

SEAL